(b) The scheduled takeoff weight must be such that the climb requirements of § 29.67 (a)(1) and (a)(2) will be met.

(c) Takeoff distance will be determined in accordance with § 29.61.

[Doc. No. 24802, 61 FR 21899, May 10, 1996; 61 FR 33963, July 1, 1996]

§ 29.61 Takeoff distance: Category A.

(a) The normal takeoff distance is the horizontal distance along the takeoff path from the start of the takeoff to the point at which the rotorcraft attains and remains at least 35 feet above the takeoff surface, attains and maintains a speed of at least V_{TOSS}, and establishes a positive rate of climb, assuming the critical engine failure occurs at the engine failure point prior to the takeoff decision point.

(b) For elevated heliports, the takeoff distance is the horizontal distance along the takeoff path from the start of the takeoff to the point at which the rotorcraft attains and maintains a speed of at least V_{TOSS} and establishes a positive rate of climb, assuming the critical engine failure occurs at the engine failure point prior to the takeoff decision point.

[Doc. No. 24802, 61 FR 21899, May 10, 1996]

§ 29.62 Rejected takeoff: Category A.

The rejected takeoff distance and procedures for each condition where takeoff is approved will be established with—

(a) The takeoff path requirements of §§ 29.59 and 29.60 being used up to the TDP where the critical engine failure is recognized and the rotorcraft is landed and brought to a complete stop on the takeoff surface;

(b) The remaining engines operating within approved limits;

(c) The landing gear remaining extended throughout the entire rejected takeoff; and

(d) The use of only the primary controls until the rotorcraft is on the ground. Secondary controls located on the primary control may not be used until the rotorcraft is on the ground. Means other than wheel brakes may be used to stop the rotorcraft if the means are safe and reliable and consistent results can be expected under normal operating conditions.

[Doc. No. 24802, 61 FR 21899, May 10, 1996, as amended by Amdt. 29–44, 64 FR 45337, Aug. 19, 1999]

§ 29.63 Takeoff: Category B.

The horizontal distance required to take off and climb over a 50-foot obstacle must be established with the most unfavorable center of gravity. The takeoff may be begun in any manner if—

(a) The takeoff surface is defined;

(b) Adequate safeguards are maintained to ensure proper center of gravity and control positions; and

(c) A landing can be made safely at any point along the flight path if an engine fails.

[Doc. No. 5084, 29 FR 16150, Dec. 3, 1964, as amended by Amdt. 29–12, 41 FR 55471, Dec. 20, 1976]

§ 29.64 Climb: General.

Compliance with the requirements of §§ 29.65 and 29.67 must be shown at each weight, altitude, and temperature within the operational limits established for the rotorcraft and with the most unfavorable center of gravity for each configuration. Cowl flaps, or other means of controlling the engine-cooling air supply, will be in the position that provides adequate cooling at the temperatures and altitudes for which certification is requested.

[Doc. No. 24802, 61 FR 21900, May 10, 1996]

§ 29.65 Climb: All engines operating.

(a) The steady rate of climb must be determined—

(1) With maximum continuous power;

(2) With the landing gear retracted; and

(3) At V_y for standard sea level conditions and at speeds selected by the applicant for other conditions.

(b) For each Category B rotorcraft except helicopters, the rate of climb determined under paragraph (a) of this section must provide a steady climb